

**OPERATOR-COMMITTED MITIGATION MEASURES,
STANDARD AND SITE-SPECIFIC TERMS AND CONDITIONS,
AND RECOMMENDED MITIGATION MEASURES**

**ENVIRONMENTAL ASSESSMENT, WY-070-EA13-226
U.S. Department of the Interior
Bureau of Land Management, Buffalo Field Office, Wyoming**

Uranerz Energy Corporation, Hank Unit Uranium *In-Situ* Recovery Project

**Bureau of Land Management Mine Plan of Operations WYW-169904;
Wyoming Department of Environmental Quality, Land Quality Division, Permit to Mine
PT778; and Nuclear Regulatory Commission Source Material License SUA-1597**

OPERATOR-COMMITTED MITIGATION MEASURES

Listed below, by resource, are the measures that Uranerz incorporated into their Hank Unit Uranium ISR Mine POO to minimize or alleviate impacts to resources on public lands from the proposed operations related to the project.

Air Quality:

Uranerz commits to controlling emissions generated from Project-related activities within the Project area by:

1. Using water and other dust control measures on heavily-used roads and areas.
2. Enforcing appropriate speed limits on access roads.
3. Revegetating disturbed areas as soon as possible following disturbance.
4. Reclaiming all disturbed areas as soon as, and when and where, possible.
5. Limiting tailpipe emissions via maintaining engines according to manufacturer's recommendations.
6. Prohibition on open burning of garbage or refuse.
7. Implement an airborne radiation monitoring program to detect radon and air particulate releases from the Hank Unit SPF.

Cultural Resources and Native American Concerns:

Uranerz commits to avoiding, or minimizing to the extent possible, impacts from Project-related activities within the Project area by:

1. Adhering to all mitigation measures listed in the *Memorandum of Agreement Among United States Nuclear Regulatory Commission, United States Bureau of Land Management Buffalo Field Office, the Advisory Council on Historic Preservation, the Wyoming State Historic Preservation Officer, Cheyenne River Sioux Tribe, Crow Tribe, Eastern Shoshone Tribe, Fort Peck Assiniboine/Sioux Tribe, Northern Arapaho Tribe, Oglala Sioux Tribe, and Uranerz Energy Corporation Regarding Mitigation of Adverse Effects to Historic Properties from the Nichols Ranch ISR Project in Campbell and Johnson Counties, Wyoming* (2011). This document is referred to as the NRC MOA.
2. Adhering to all mitigation measures listed in the *Memorandum of Agreement Among the Bureau of Land Management, The Advisory Council on Historic Preservation, the Wyoming State Historic Preservation Officer and Uranerz Energy Corporation Regarding Mitigation of the Adverse Effects to Historic Properties from The Hank Unit of the Nichols Ranch In-Situ Recovery Project in Campbell County, Wyoming* (2015). This document is referred to as the BLM MOA.

Other Minerals Projects and Geology:

Uranerz commits to avoiding or minimizing potential conflicts between their Hank Project and other various minerals projects occurring in/near the Project area, and minimizing impacts to the local geology, by:

1. Maintaining close communication with other proponents working in/near the Project area to avoid potential conflicts between the Hank Project and their various operations.
2. Maintaining at least 400 vertical feet depth between the zone(s) from which uranium will be removed and the coal seam(s) from which CBNG is being and/or will be removed.

Livestock Grazing:

Uranerz commits to minimizing impacts to livestock grazing within the Project area by:

1. Removing all project-related fencing once WDEQ LQD (and BLM, for BLM-administered lands) has deemed permanent reclamation adequate. This will allow livestock grazing to resume in those areas within the Project area that have been fenced out during the Project's life.

Vegetation, including Special Status Species, Noxious Weeds, and Wetlands:

Uranerz commits to minimizing or eliminating impacts to Special Status (SS) species and wetlands, and to minimize or eliminate infestations of noxious weeds in the Project area by:

1. Reclaiming and revegetating all disturbed lands as soon as possible after decommissioning of the wellfield.
2. Wash all vehicles entering the Project area, as needed.
3. Applying herbicide as necessary, to eradicate and control the spread of Canada thistle, and prevent the introduction of any additional noxious weeds. Any pesticide or herbicide

application to BLM surface will require that the operator submit for prior approval a Pesticide Use Proposal as well as a subsequent Pesticide Application Record.

4. Using only certified weed-free seed.
5. Mulching areas of bare soil to discourage rooting of noxious weeds in these areas.

Soil Resources:

Uranerz commits to minimize potential impacts and disturbance of soil resources by:

1. Managing construction using proven and effective site management techniques.
2. Utilizing to the extent possible previously-disturbed areas, including existing ROWs, designating limited equipment/materials storage and staging areas, and other means.
3. Segregating topsoil from subsoil(s) during their removal.
4. Salvaging sufficient topsoil during all construction operations to facilitate revegetation during reclamation operations.
5. On BLM-administered lands – Whenever possible, directly haul and apply topsoil to areas that are ready to be reclaimed (rather than stockpiling), to minimize potential topsoil losses and maximize viability of the soils' microflora and microfauna.
6. On BLM-administered lands – Those topsoil stockpiles needed will be stored in designated stockpiles in accordance with WDEQ LQD rules and regulations, and seeded as soon as possible to prevent erosion and maintain soil viability.
7. Minimize project-related off-road travel during periods when soils are saturated, or when conditions would result in excessive road rutting (>4 inches).
8. Develop a Storm Water Pollution and Prevention Plan (SWPPP) for newly-affected areas. The SWPPP will describe measures for controlling runoff and erosion (such as water bars, berms, interceptor ditches, etc.). Inspection reports on these features will be on file in the Hank SPF.
9. Use interim erosion control measures (such as mulch, jute netting, etc., as described in the SWPPP) on unstable soils, steep slopes, and wetlands areas to prevent erosion and sedimentation until vegetation is reestablished.
10. Minimize disturbance to vegetated cuts and fills on new and existing roads.
11. Placing suitable growth materials, replacing topsoil, on all disturbed areas prior to revegetation.

12. Conduct interim and permanent revegetation activities on all disturbed areas in accordance with the approved Reclamation Plan as soon as practical following the disturbance.

Visual Resources:

Uranerz commits to minimizing impacts to visual resources within/near the Project area by:

1. Applying water, or using other appropriate measures, on roads to control fugitive dust.
2. Enforcing appropriate speed limits on access roads to mitigate fugitive dust.
3. Designing and constructing roads to follow natural contours wherever practicable.
4. Using areas of existing disturbance for installing new roads, pipeline corridors, and power lines, wherever possible.
5. Locating all pipelines in corridors next to or within road areas, wherever possible.
6. Burying power lines servicing wells, wherever practical.
7. Placing buried power lines inside or within 5 feet of pipeline trenches, when possible.
8. Designing and constructing aboveground power lines within 2 miles from the base elevation of North Middle Pumpkin Butte (5,500' elevation level) to minimize their visual contrast.
9. Design roads, pipelines and well locations to be physically shielded by (rather than cut through), areas containing dense patches of vegetation, such as sagebrush (wherever practicable).
10. Feathering brush removal on drilling locations within areas of dense sagebrush or other vegetation to reduce visual contrast, and limit to a 30 feet diameter around each well.
11. Painting all aboveground infrastructure related to well production in a color that best blends in with the surrounding landscape. This includes all aboveground permanent structures (such as recovery equipment, tanks, etc.) whose exterior color is not determined by safety requirements. The color would typically be Covert Green (PANTONE for Architecture Color Guide 18-0617 TPX) for header houses located on BLM-administered lands. The remaining header houses located on privately-owned lands would be painted Covert Green, or Carlsbad Canyon Tan (Munsell Soil Color 2.5Y 6/2), depending on which color best blends into the surrounding environment.
12. Using aggregate and other materials to surface roads and around well locations and permanent aboveground structures of a color that does not create a visual contrast to the surrounding landscape.

13. Expediently reclaiming and reseeding all disturbed lands in accordance with the project-specific Reclamation Plan.

Water Resources:

Uranerz commits to mitigating and reducing potential impacts on water resources by:

1. Complying with all appropriate well completion standards specified by NRC and WDEQ (and BLM, on BLM-administered lands). This will ensure minimal water resource impacts (including erosion) due to spills, leaks, excursions, etc., from wells.
2. Developing and implementing a Storm Water Pollution and Prevention Plan (SWPPP) for newly-affected areas. Uranerz' current Wyoming Pollutant Discharge Elimination System (WYPDES) permit and SWPPP for the Nichols Ranch Unit Project will be expanded to include the Hank Unit Project. The SWPPP will describe measures for controlling runoff and erosion and limiting or preventing storm water pollution (such as properly-sized culverts, water bars, berms, interceptor ditches, riprap, hay bales, etc.), as well as procedures for periodic inspections of these measures. Inspection reports on these measures will be on file in the Hank SPF.
3. Stream-crossing locations (if any) would be at the natural streambeds' elevation in shallow water, and not using fill materials at these locations.
4. Training personnel to properly handle and transport hazardous materials to reduce potential occurrences of spills.
5. Replacing and regrading topsoil in, and seeding, disturbed areas to restore pre-disturbance contours and re-establish vegetation in a timely manner.
6. Seeding will occur during the first appropriate growing season after topsoil replacement.
7. Managing, storing, handling, and disposing of all petroleum products and wastes in compliance with all appropriate federal and state regulations, and to reduce or avoid the potential occurrence of spills, leaks, or releases. This includes training personnel in these methods.
8. Developing and implementing an Emergency Response Plan (ERP) to address potential spills, leaks, and releases of petroleum products and wastes.
9. Mitigating or avoiding potential spills, leaks, or releases of petroleum products and wastes by conducting routine maintenance and inspections on all appropriate vehicles and equipment.
10. Properly cleaning up and disposing of all petroleum products and wastes that spilled, leaked, or were released, in accordance with federal and state regulations. This includes reporting to WDEQ Water Quality Division (WQD) all spills of petroleum products and hazardous chemicals in excess of the reportable quantities.

11. Developing and implementing waste management programs to meet applicable WDEQ Solid and Hazardous Waste Division (SHWD) regulatory requirements, and other federal and state regulations.
12. Developing and implementing a management program for disposing of nonradioactive hazardous waste (organic solvents, paints, waste oil, paint thinners, empty chemical containers, tank sediments/sludges, chemical waste, spent batteries, etc.). This program will be developed to meet applicable federal, state, and local regulatory requirements.
13. Using portable self-contained chemical toilets during the construction phase (prior to constructing a septic system), with the contents removed and disposed of at an approved sewage facility in accordance with applicable rules and regulations.
14. Properly constructing and using a WDEQ WDQ permitted on-site septic system for disposal of sanitary wastes, for an estimated maximum of 35 persons. This system will be situated on privately-owned surface lands just north of the Hank SPF.
15. Implementing proper and timely removal and disposal of all debris and other waste materials not placed in dumpsters or trash cages in a properly permitted landfill.
16. Disposing of all solid wastes in appropriate permitted waste disposal facilities.
17. Properly handling and disposing of all radioactive wastes at a properly permitted and licensed waste disposal facility in accordance with applicable federal and state regulations.
18. Pipeline construction shall not block nor change the natural course of any drainage. Pipelines shall cross perpendicular to drainages. Pipelines shall not be run parallel in drainage bottoms.
19. Designing and implementing numerous engineering controls and management measures to minimize spills, leaks, and releases of pregnant (uranium-containing) lixiviant or process fluid between the wellfield and the Hank SPF. Such controls include installation of high- and low-pressure alarms, shutdowns, and flow meters.
20. Surveying any area having experienced a spill, leak, or release of pregnant lixiviant or process fluid with a gamma meter, and collecting soil samples. This includes documenting in a spill record the volume of the spill, the area affected, and the corrective action taken, along with the survey and soil sampling and analysis data and results.
21. Conducting additional soil sampling and analysis in those areas exceeding twice background gamma, in accordance with NRC standards. These samples will be analyzed for certain radiological concentrations (isotopes radium-226, thorium-230, and lead-210) to determine if these have increased significantly above background; these samples will also be analyzed for uranium content.

22. Removing soil that exceeds twice background for certain radiological concentrations (isotopes radium-226, thorium-230, and lead-210), and placing it in approved by-product storage containers, and shipping it to a license disposal site approved by the NRC.
23. Monitoring surface and ground water quality by determining baseline conditions, establishing routine water sampling for analysis for quality during mining and reclamation, including potential contaminants and radioactive parameters as committed in the Mine Plan of Operations.

Wildlife, Including Special Status Animal Species:

Uranerz commits to minimizing potential impacts to wildlife by implementing the following measures (listed by type):

Big Game Species:

1. Utilizing 3-strand fencing that complies with WDEQ LQD Type III fencing guidelines. This type of fencing will prevent livestock from entering the wellfield, yet allow the safe passage of wildlife through that area.
2. Enforcing appropriate speed limits on access roads.
3. Prior to installation of the wellfield fence, fencing all drilling well pits: on at least 3 sides while drilling; and, all 4 sides after drill rig moves off that well site and for the duration that pit is open.
4. Informing employees that hazing or harassing the animals is prohibited, and to minimize any direct disturbance to the animals whenever possible.
5. Informing employees and contractors that compliance with all wildlife laws is required. This will help minimize potential increases in poaching.
6. Disciplining, and potentially dismissing, any employee or contractor discovered violating wildlife laws on the Project area. This will help minimize potential increases in poaching.

Raptor Species:

1. Refraining from performing any surface-disturbing activities within 0.5 miles of any identified raptor nests from February 1 through July 31, annually, prior to conducting a raptor occupancy survey for the current breeding season.
2. Refraining from performing any surface-disturbing activities within 0.5 miles of any raptor nests identified as active from the occupancy survey, from February 1 through July 31, for that year.
3. Constructing any aboveground power lines, permanent high-profile structures (such as storage tanks) or other perch sites greater than 0.5 miles of any active greater sage-grouse lek near the Hank Unit Project area. Any needed power lines would be constructed in

compliance with *Suggested Practices for Raptor Protection and Power Lines: The State of the Art in 2006* (Avian Power Line Interaction Committee (APLIC) 2006).

4. Minimizing the amount of disturbance associated with the Hank Unit Project. This will minimize potential impacts to local raptor prey base populations.
5. Conducting annual raptor monitoring and mitigative planning to minimize conflicts between project-related activities and active nest sites.

Greater Sage-Grouse (GSG):

1. Refraining from occupying the surface, or engaging in disruptive activities, in or within 0.25-mile radius of the perimeter of occupied GSG leks.
2. Refraining from constructing any aboveground power lines, permanent high-profile structures (such as storage tanks) or other perch sites greater than 0.5 miles of any active GSG lek near the Hank Unit Project area. Any needed power lines would be constructed in compliance with *Suggested Practices for Raptor Protection and Power Lines: The State of the Art in 2006* (APLIC 2006).
3. Advising project personnel of appropriate speed limits for access roads, that they are prohibited from hazing or harassing the animals, and that they should minimize any direct disturbance to the animals whenever possible.
4. Minimizing the removal of vegetation, wherever possible.
5. Revegetating disturbed areas as soon as practicable following completion of project activities.

Bald and Golden Eagles:

1. Refraining from surface disturbances occurring within 1 mile of all bald eagle winter roost sites (identified in Figure 3.8 of the EA) seasonally (November 1 through April 1), annually. This distance and timing may be adjusted based on site-specific information obtained through coordination with, and written approval of, the U.S. Fish and Wildlife Service (USFWS).
2. Implementing additional measures, such as remote monitoring and restricting maintenance visitation, within 0.5 miles of all bald eagle winter roost sites (identified in Figure 3.8 of the EA). This includes limiting all site visits to between 9:00am and 3:00pm seasonally (November 1 through April 1), to prevent disturbance to roosting bald eagles.

BLM-Sensitive Species:

1. Refraining from surface disturbance within the prairie dog towns within the Hank Unit Project area (illustrated in Exhibit D9-3, in Appendix D9 of the Mine POO; see Uranerz 2012).

2. Minimizing the amount of disturbance associated with the Hank Unit Project.

General Wildlife Species:

1. Protecting big game species by (prior to installation of the wellfield fence) fencing all drilling well pits: on at least 3 sides while drilling; and, all 4 sides after drill rig moves off that well site and for the duration that pit is open.
2. Removing project-related fencing once reclamation is deemed successful.
3. Minimizing the removal or disturbance of vegetation through construction site management.
4. Implementing the interim and permanent reclamation procedures outline in the EA, Sections 2.2.3.2 through 2.2.3.5.
5. Advising project personnel of appropriate speed limits for access roads, that they are prohibited from hazing or harassing the animals, and that they should minimize any direct disturbance to the animals whenever possible. This will help minimize wildlife mortality due to vehicle collisions.
6. Informing employees and contractors that compliance with all wildlife laws is required. This will help minimize potential increases in poaching.
7. Disciplining, and potentially dismissing, any employee or contractor discovered violating wildlife laws on the Project area. This will help minimize potential increases in poaching.
8. Installing buried fiber optic communication lines to allow for remote monitoring and controlling of wellfield uranium recovery and aquifer restoration activities between the header houses and the Hank SPF. This will reduce disturbances due to vehicle traffic and human presence in the wellfield.

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STANDARD TERMS & CONDITIONS

In addition to the Operator-Committed Mitigation Measures listed above, and those incorporated from the Buffalo RMP (1985) and PRB FEIS (2003) Records of Decision (RODs), the BLM is including the following Standard Terms & Conditions (T&Cs) listed below to assist in alleviating environmental impacts and avoiding unnecessary or undue degradation to public lands. These Standard T&Cs apply to all locatable minerals projects proposed to occur on BLM-administered surface lands.

General:

1. Any changes to the approved Plan of Operations and/or these T&Cs (including the Site-Specific T&Cs) shall be approved by the BLM-Buffalo Field Office AO prior to being implemented.
2. If any cultural values [sites, artifacts, human remains (Appendix L FEIS and ROD)] are observed during construction or operation of this project, they will be left intact and the Buffalo Field Manager notified. The BLM Authorized Officer (AO) will conduct an evaluation of the cultural values to establish appropriate mitigation, salvage or treatment. The Operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the Operator is to immediately stop work that might further disturb such materials, and contact the BLM AO. Within five working days the AO will inform the Operator as to:
 - a. Whether the materials appear eligible for the National Register of Historic Places;
 - b. The mitigation measures the Operator will likely have to undertake before the site can be used (assuming *in situ* preservation is not necessary); and,
 - c. The timeframe for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the Wyoming State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the Operator will then be allowed to resume construction measures.
3. If paleontological resources, either large or conspicuous, and/or of significant scientific value, are discovered during construction, the find will be reported to the BFO AO immediately. Construction will be suspended within 250 feet of said find. An evaluation of the paleontological discovery will be made by a BLM-approved professional paleontologist within five (5) working days, weather permitting, to determine the appropriate action(s) to prevent the potential loss of any significant paleontological values. Operations within 250 feet of such a discovery will not resume until written authorization to proceed is issued by the BLM AO. The Operator will bear the cost of any required paleontological appraisals, surface collection of fossils, or salvage of any large conspicuous fossils of significant scientific interest discovered during the operation.

Surface Use:

Construction:

1. Maintain a minimum 20-foot undisturbed vegetative border between toe-of-fill of pad and/or pit areas and the edge of adjacent drainages, unless otherwise directed by the BLM AO.
2. The minimum diameter for culverts will be 18 inches. However, all culverts will be appropriately sized in accordance with standards in BLM Manual 9113.
3. Construction and other project-related traffic will be restricted to approved routes. Cross-country vehicle travel will not be allowed.
4. Maximum design speed on all Operator-constructed and -maintained roads will not exceed 25 miles per hour.
5. During construction, emissions of particulate matter from mine pit and road construction would be minimized by application of water or other non-saline dust suppressants with at least 50 percent control efficiency. Dust inhibitors (surfacing materials, non-saline dust suppressants, and water) will be used as necessary on unpaved roads that present a fugitive dust problem. The use of chemical dust suppressants on public surface will require prior approval from the BLM AO.
6. Drilling mud pits would be temporarily fenced to prevent human and animal intrusion and injury. The fencing would remain in place until the drilling fluids have been removed or evaporated, after which the pits would be backfilled and permanently reclaimed.
7. The operator shall submit a Modification for the Mine POO to BLM for approval, and receive BLM approval, prior to any new surface disturbing activities not specifically addressed in the approved Mine POO.

Reclamation:

1. All disturbed lands associated with this project, including the mining pits, access roads, etc., will be expediently reclaimed and reseeded in accordance with the surface use plan and any pertinent Site-Specific T&Cs.
2. Disturbed lands will be re-contoured back to conform to existing undisturbed topography. No depressions will be left that trap water or form ponds.
3. Before the location has been reshaped and prior to redistributing the topsoil, the Operator will rip or scarify the mining areas and access roads to a depth of at least 12 inches. The rippers are to be no farther than 24 inches apart.
4. Distribute the topsoil evenly over the entire location and other disturbed areas. Prepare the seedbed by disking following the contour.

5. Waterbars are to be constructed at least one (1) foot deep, on the contour with approximately two (2) feet of drop per 100 feet of waterbar to ensure drainage, and extended into established vegetation. All waterbars are to be constructed with the berm on the downhill side to prevent the soft material from silting in the trench. The initial waterbar should be constructed at the top of the backslope. Subsequent waterbars should follow the following general spacing guidelines:

Slope (percent)	Spacing Interval (feet)
< 2	200
2 – 4	100
4 – 5	75
> 5	50

6. BLM will not agree that the performance bond may be released until the area has been successfully revegetated (evaluation will be made after the second complete growing season) and has met all other reclamation goals of the surface owner and surface management agency.
7. Soil fertility testing and the addition of soil amendments may be required to stabilize some disturbed lands.
8. Any mulch utilized for reclamation needs to be certified weed free.

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SITE-SPECIFIC TERMS & CONDITIONS

In addition to the Operator-Committed Mitigation Measures, and Standard T&Cs incorporated from the Buffalo RMP and PRB FEIS Records of Decision (RODs), both listed above, the BLM is including the following Site-Specific T&Cs to assist in alleviating environmental impacts and avoiding unnecessary or undue degradation to public lands. These Site-Specific T&Cs apply to all Hank Unit Uranium ISR Project operations proposed to occur on BLM-administered surface lands.

Air Quality:

1. During construction, emissions of particulate matter from mining pit and resource road construction will be minimized by application of water, or other dust suppressants, with at least 50 percent control efficiency. Roads and well locations constructed on soils susceptible to wind erosion could be appropriately surfaced or otherwise stabilized to reduce the amount of fugitive dust generated by traffic or other activities, and dust inhibitors (surfacing materials, non-saline dust suppressants, and water) could be used as necessary on unpaved collector, local and resource roads that present a fugitive dust problem. The use of chemical dust suppressants on BLM surface will require prior approval from the BLM authorized officer.

Surface Use and Reclamation:

1. The BLM will evaluate reclamation success using the requirements set forth in the Wyoming Statewide Reclamation Policy, revised 2012, provided below (BLM WY Instruction Memorandum 2012-032, dated March 27, 2012).

Wyoming BLM Statewide Reclamation Policy

The following Reclamation Requirements apply to all surface disturbing activities, including BLM initiated activities, and must be addressed in each reclamation plan. These requirements also must be met prior to release of the bond and/or the reclamation liability. Where these Reclamation Requirements differ from other applicable federal, laws, rules, and regulations, those requirements supersede this policy. State and/or local statutes or regulations may also apply.

1. Manage all waste materials:
 - a. Segregate, treat, and/or bio-remediate contaminated soil material.
 - b. Bury only authorized waste materials on site. Buried material must be covered with a minimum of three feet of suitable material or meet other program standards.
 - c. Ensure all waste materials moved off-site are transported to an authorized disposal facility.
2. Ensure subsurface integrity, and eliminate sources of ground and surface water contamination:
 - a. Properly plug all drill holes and other subsurface openings (mine shafts, adits, etc.).

- b. Stabilize, properly back fill, cap, and/or restrict from entry all open shafts, underground workings, and other openings.
 - c. Control sources of contamination and implement best management practices to protect surface and ground water quality.
- 3. Re-establish slope stability, surface stability, and desired topographic diversity:
 - a. Reconstruct the landscape to the approximate original contour or consistent with the land use plan.
 - b. Maximize geomorphic stability and topographic diversity of the reclaimed topography.
 - c. Eliminate highwalls, cut slopes, and/or topographic depressions on site, unless otherwise approved.
 - d. Minimize sheet and rill erosion on/or adjacent to the reclaimed area. There shall be no evidence of mass wasting, head cutting, large rills or gullies, down cutting in drainages, or overall slope instability on/or adjacent to the reclaimed area.
- 4. Reconstruct and stabilize water courses and drainage features:
 - a. Reconstruct drainage basins and reclaim impoundments to maintain the drainage pattern, profile, and dimension to approximate the natural features found in nearby naturally functioning basins.
 - b. Reconstruct and stabilize stream channels, drainages, and impoundments to exhibit similar hydrologic characteristics found in stable naturally functioning systems.
- 5. Maintain the biological, chemical, and physical integrity of the topsoil and subsoil (where appropriate):
 - a. Identify, delineate, and segregate all salvaged topsoil and subsoil based on a site specific soil evaluation, including depth, chemical, and physical characteristics.
 - b. Protect all stored soil material from erosion, degradation, and contamination.
 - c. Incorporate stored soil material into the disturbed landscape.
 - d. Seed soils to be stored beyond one growing season, with desired vegetation.
 - e. Identify stockpiles with appropriate signage.
- 6. Prepare site for revegetation:
 - a. Redistribute soil materials in a manner similar to the original vertical profile.
 - b. Reduce compaction to an appropriate depth (generally below the root zone) prior to redistribution of topsoil, to accommodate desired plant species.
 - c. Provide suitable surface and subsurface physical, chemical, and biological properties to support the long term establishment and viability of the desired plant community.
 - d. Protect seed and seedling establishment (e.g. erosion control matting, mulching, hydro-seeding, surface roughening, fencing, etc.)
- 7. Establish a desired self-perpetuating native plant community:
 - a. Establish species composition, diversity, structure, and total ground cover appropriate for the desired plant community.

- b. Enhance critical resource values (e.g. wildlife, range, recreation, etc.), where appropriate, by augmenting plant community composition, diversity, and/or structure.
 - c. Select genetically appropriate and locally adapted native plant materials based on the site characteristics and ecological setting.
 - d. Select non-native plants only as an approved short term and non-persistent alternative to native plant materials. Ensure the non-natives will not hybridize, displace, or offer long-term competition to the endemic plants, and are designed to aid in the re-establishment of native plant communities.
- 8. Reestablish complementary visual composition:
 - a. Ensure the reclaimed landscape features blend into the adjacent area and conform to the land use plan decisions.
 - b. Ensure the reclaimed landscape does not result in a long term change to the scenic quality of the area.
- 9. Manage Invasive Plants:
 - a. Assess for invasive plants before initiating surface disturbing activities.
 - b. Develop an invasive plant management plan.
 - c. Control invasive plants utilizing an integrated pest management approach.
 - d. Monitor invasive plant treatments.
- 10. Develop and implement a reclamation monitoring and reporting strategy:
 - a. Conduct compliance and effectiveness monitoring in accordance with a BLM (or other surface management agency) approved monitoring protocol.
 - b. Evaluate monitoring data for compliance with the reclamation plan.
 - c. Document and report monitoring data and recommend revised reclamation strategies.
 - d. Implement revised reclamation strategies as needed.
 - e. Repeat the process of monitoring, evaluating, documenting/reporting, and implementing, until reclamation goals are achieved.
- 2. Whenever possible, reclamation will be conducted concurrently with mining activities, or as soon as practical following disturbance, in order to restore the lands to pre-mining conditions as soon as possible.
- 3. The interim (“temporary”) and permanent reclamation seed mixtures noted in the EA (see below) will be applied in the amounts specified in pounds of pure live seed (PLS) per acre. There will be no primary or secondary noxious weed seed in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within 9 months prior to purchase. The seed mixture container will be tagged in accordance with State law(s) and available for inspection by the BLM AO.

The Operator will seed all topsoil stockpiles created via removal of topsoil from BLM-administered lands during the Project’s construction phase with the following seed

mixture, to reduce erosion of the topsoil and assist in maintaining the topsoil's biological viability:

Interim ("Temporary") Seed Mix ¹:

<u>Species</u>	<u>Percent of Mix</u>	<u>Lbs PLS/acre ²</u>
Western wheatgrass	43	6.0
Thickspike wheatgrass	43	6.0
Slender wheatgrass	<u>14</u>	<u>2.0</u>
TOTAL	100	14.0

¹ Also provided in the EA, Section 2.2.3.2, Construction Phase – Topsoil Salvage Operations, and Construction Phase – Interim Revegetation Practices.

² Indicated amounts are for drill seeding; amounts are to be doubled for broadcast seeding.

Prior to commencing the Project's decommissioning and reclamation phase, the Operator will inform BLM BFO that such activities are ready to begin. At that time, BLM BFO will inform the Operator of the preferred seed mixture for use in the Project's area, if different from that indicated below:

Permanent Seed Mix ¹:

<u>Species</u>	<u>Percent of Mix</u>	<u>Lbs PLS/acre ²</u>
Western wheatgrass	35	5.5
Bluebunch wheatgrass	19	3.0
Green needlegrass	9	1.5
Slender wheatgrass	19	3.0
Needle-and-thread	9	1.5
Purple prairie clover	3	0.5
Prairie coneflower	3	0.5
Rocky Mountain bee plant	<u>3</u>	<u>0.5</u>
TOTAL	100	16.0

¹ Also provided in the EA, Section 2.2.3.5, Decommissioning and Reclamation Phase – Permanent Revegetation Practices.

² Indicated amounts are for drill seeding; amounts are to be doubled for broadcast seeding.

4. Seeding should be done preferably in the fall after September 15, until the soil is frozen or conditions prevent effective seeding operations. Seeding may also be done as early as possible the following spring (between spring thaw and April 15) to take advantage of available ground moisture. Seeding shall be repeated until a satisfactory stand is established as determined by the BLM Authorized Officer. Evaluation of growth will not be made before completion of the second growing season after seeding.
5. The Operator will be responsible for prevention and control of noxious weeds and weeds of concern on all areas of surface disturbance associated with this project (well locations, roads, water management facilities, etc.) Use of pesticides shall comply with the

applicable federal and state laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of Interior. Prior to the use of pesticides on public land, the holder shall obtain from the BLM authorized officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the authorized officer to such use.

Wildlife:

Threatened and Endangered Species:

1. In the event that a threatened or endangered species (plant or animal) should become established on or immediately adjacent to the Hank Unit Project area, Uranerz will contact the U.S. Fish and Wildlife Service (USFWS), the Wyoming Game and Fish Department (WGFD), and the BLM, as required, in order to develop and implement the necessary mitigation measures to prevent disturbances or impacts to any such species.

Migratory Birds:

1. In order to mitigate possible impacts to migratory birds, all attempts will be made to remove vegetation outside of the nesting season (February 1 – August 31) in order to prevent take of migratory birds, nests, and chicks. If it is not possible to remove topsoil outside of the nesting season, then prior to topsoil stripping, a migratory bird survey will be conducted on the proposed disturbance area within the Hank Unit Project area, including a buffer of 0.5 miles (1 mile for ferruginous hawks). If migratory birds, nests, or chicks are observed on proposed disturbance areas as a result of the survey, Uranerz will delay mining activities until the end of the nesting season.

Bald and Golden Eagles:

1. Conduct mining to minimize impacts to any active nests that are currently present and any nests that may establish during the breeding season of February through July.
2. In the event that a raptor nest is on or immediately adjacent to the mine area and it becomes necessary to "take" or remove a raptor nest, the U.S. Fish and Wildlife Service (USFWS) would be contacted as soon as a "take" situation is anticipated. Sufficient lead time would be allowed for developing and implementing a mitigation plan, and to avoid disrupting the mining operation.

Programmatic mitigation measures identified in the PRB FEIS ROD:

Programmatic mitigation measures are those, as determined through analysis, which may be appropriate to apply at the time of Mine POO approval if site-specific conditions warrant. These mitigation measures can be applied by BLM, as determined necessary at the site-specific NEPA mine plan analysis stage, as Site-Specific T&Cs and will be in addition to Operator-Committed Mitigation Measures, and Standards T&Cs. This will include the submission of as-built or as-mined maps to the BLM.

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RECOMMENDED MITIGATION MEASURES

Listed below is are additional mitigation measures that BLM is recommending that Uranerz adopt and follow, to alleviate potential adverse impacts to a BLM Special Status Species, the Greater Sage-grouse (GSG). GSG is not a listed threatened and endangered (T&E) species, nor is it protected by Federal law; therefore, BLM cannot require mitigation on its' behalf (see 43 CFR 3809.420(b)(7) and .420(a)(6)). The Governor of the State of Wyoming has passed two Executive Orders (E.O.'s) (#2010-4, 2010, and #2011-05, 2011, which updates the 2010 E.O.) to reduce adverse impacts to the GSG in Wyoming, aide in its' conservation, and avoid this species becoming listed as T&E. BLM WY is following these measures, to also aide in accomplishing these goals, including avoiding its' listing.

As GSG is not a listed T&E species, BLM cannot require mitigation on its' behalf (per 43 CFR 3809.420(b)(7)). In addition, BLM WY's current policy (Instruction Memorandum 2012-019, dated March 27, 2012) is that Locatable Minerals projects (including uranium) are not required to adopt the measures listed therein. BLM may recommend adopting these measures, but cannot require them. As Uranerz has self-adopted for this project a number of mitigation measures on behalf of GSG (see Operator-Committed Mitigation Measures, above), there are others that would also minimize or alleviate impacts to the GSG in Wyoming, a resource on public lands, from the proposed operations related to the project; BLM BFO recommends these here.

1. Surface-disturbing activities within 2.0 miles of any identified GSG leks are prohibited or restricted from March 15 through June 3, annually.
2. The permanent reclamation seed mixture shall be formulated in order to reestablish native grasses, shrubs, and forbs which are desirable to GSG in terms of forage and habitat.
3. If a previously unknown lek is identified during surveys (April 1-May 7), a Buffalo BLM biologist shall be notified.

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